

Serial No. 10/073,717

Reply to Office Action of October 4, 2004

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REMARKS***Claim Disposition***

Claims 1-16 are pending, and Claims 7,8,10, and 11 are withdrawn from consideration.

With this amendment, independent claim 1 has been amended. Claims 1-16 will remain pending in this application upon entry of the present amendment.

The rejections under 35 U.S.C. §112, second paragraph, should be withdrawn

Claims 1-6, 9, and 12-16 were rejected under 35 U.S.C. §112, second paragraph, for being indefinite; the Office Action indicating that the limitations in the claim body directed to the first and the second substrate is unclear. As a basis for this rejection, the Office Action essentially indicates that as the recitations of a first and a second substrate appear in the preamble, and the Applicant "has not claimed a first or second substrate, therefore placing a limitation on the materials for the second substrate is unclear". The Office Action also indicates that these limitations "appear to be directed to an intended use or method step in using the applicator". See Office Action page 2-3.

This rejection is respectfully traversed. "There is nothing inherently wrong with defining some part of an invention in functional terms", and "[f]unctional language does not, in and of itself, render a claim improper". See MPEP §2173.05(g) citing *In re Swinehart*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971). Moreover, guidance is provided in the MPEP regarding the limitations of the line of cases supporting the proposition that the material or article worked upon does not limit apparatus claims. The line of cases supporting this proposition are "limited to claims directed to machinery which works upon an article or material in its intended use. It does not apply to product claims or kit claims...". See MPEP § 2115, including final paragraph.

Claim 1 is amended to correct an inadvertent typographical error, and to more explicitly set forth that the claim places functional limitations on the claimed structure. While the preamble of claim 1 includes the recitation of a first metal substrate and a second substrate..., the claimed article includes the structural limitation: "an anaerobic polymerization reaction chemical reactant...". The claim further includes the limitation: "at least one of the first metal substrate and the second substrate receiving receives said chemical reactant from said applicator prior to the first substrate and the second substrate being brought into contact to initiate anaerobic polymerization therebetween, wherein the second substrate is a material selected from the group consisting of: glass and metal; and wherein said contact initiates said polymerization." See claim 1 as amended above. Clearly, the material that the substrates are selected from limit the choice of the anaerobic polymerization reaction chemical reactant. As such,

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the limitations are not merely intended use or method step, and place structural limitations on the claimed article. Accordingly, the limitations under consideration i

Furthermore, with reference to the guidance provided in MPEP § 2115 as stated above, applicants submit that the claimed article is not machinery, and therefore should not be treated in isolation from the substrates worked upon. As explained in more detail above, the claimed article comprises a chemical reactant as a component, and limitations placed on the substrate(s) to which the chemical reactant is applied limits the choice of reactant.

In light of the above, Applicants submit that this rejection of the claims under 35 U.S.C. §112 be withdrawn.

The rejections under 35 U.S.C. §102 (e) should be withdrawn

Claims 1-4, 6, 9, 12, and 13-13 were rejected under 35 U.S.C. §102 (e) for anticipation by Mainwaring et al. (US Patent 6, 779, 657). This rejection is respectfully traversed. As explained in more detail above, the claimed invention contains the structural and functional limitations: "...an anaerobic polymerization reaction chemical... wherein the second substrate is a material selected from the group consisting of: glass and metal; and wherein said contact initiates said polymerization." The Mainwaring et al. reference clearly does not contain these limitations. As such, Applicants submit that the reference does not anticipate the claims under consideration.

In light of the above, Applicants submit that this rejection of the claims under 35 U.S.C. §102(e) be withdrawn.

The rejections under 35 U.S.C. §103 (a) should be withdrawn

Claims 14-16 were rejected under 35 U.S.C. §103 (a) as unpatentable over Mainwaring et al. (see above), in view of Boeder (US Patent 4,373,077). The Office Action indicates that Mainwaring teaches every element of claims 14-16 except for the copper compounds and Boeder teaches copper compounds which would have been obvious to combine with the applicator assembly of Mainwaring. The Office Action also rejects Claim 5 as unpatentable over Mainwaring et al. (see above), in view of Spinu (US Patent 5, 210, 108). The Office Action indicates that the Mainwaring et al. reference is deficient with respect to teaching the lanthanide compound of present claim 5, and that the substitution of the lanthanide compound for the tin compound based on the teaching of Spinu would have been obvious.

This rejection is respectfully traversed.

Independent Claim 1 of the present application contains the limitations: "...an anaerobic polymerization reaction chemical...wherein the second substrate is a material selected from the group consisting of: glass and metal; and wherein said contact initiates said polymerization...". The

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Mainwaring et al. reference is deficient with respect to teaching use of reactants for anaerobic polymerization. The reference is also deficient for application of the reactant materials to metal or glass substrates. In fact, Mainwaring et al. are primarily concerned with the problem of aerobic applications of polymerizable monomers for medical applications. Column 1 of the Mainwaring reference provides that "[it] is known that monomeric forms of  $\alpha$ -cyanoacrylates are extremely reactive, polymerizing rapidly in the presence of even minute amounts of an initiator, including moisture present in the air or on moist surfaces such as animal (including human) tissues". In other words, Mainwaring et al. are concerned with polymerization reactions that occur too fast in the presence of air, and for medical purposes. On column 24, Mainwaring et al. disclose a list of initiators and accelerators for cyanoacrylate compositions, however, no teaching is provided about which of the initiators and accelerators would function anaerobically.

Boeder et al. teach anaerobically curing compositions. However, in contrast to Mainwaring et al., Boeder et al. do not teach medical applications of curing compositions. Furthermore, a problem of primary concern for Boeder et al. is that the anaerobic cure "may occur very slowly, if at all, when no active metal surfaces are involved in the bonding operation." See column 7, lines 57-59, Boeder et al., emphasis added. Applicant submits that one of ordinary skill in the art considering the Mainwaring reference and concerned with polymerization reactions that occur too fast (see above), would not be motivated to use the activators (e.g. copper octoate) which are taught by Boeder et al. to solve the problem of anaerobic reactions occurring too slowly; let alone for medical purposes on substrates involving no glass or metal.

As such, Applicants submit that the Office Action has not established a proper *prima facie* case of obviousness by combining Mainwaring and Boeder et al. Accordingly, Applicants respectfully request that this rejection of claims 14-16 be withdrawn.

Spinu et al. teaches a process directed to degradable foam materials. As stated above, the Mainwaring et al. reference is deficient for application of the reactant materials to metal or glass substrates. While teaching a polymerization process, the Spinu et al. reference clearly does not remove this deficiency. As such, Applicants submit that the Office Action has not established a proper *prima facie* case of obviousness by combining Mainwaring and Spinu et al. Accordingly, Applicants respectfully request that this rejection of claim 5 be withdrawn.

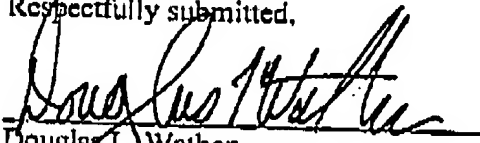
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**CONCLUSION**

Each claim is believed to be in proper form and directed to allowable and patentable subject matter. Reconsideration and allowance of the claims is solicited. If the Examiner finds to the contrary, it is respectfully requested that the undersigned in charge of this application be contacted at the telephone number given below in order to resolve any remaining issues.

Respectfully submitted,



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